

## AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1-25. (Canceled)

26. A receiver for use in receiving satellite broadcasts, comprising:  
a small antenna providing nearly hemispherical coverage;  
a low noise amplifier connected to amplify a signal received by the antenna;  
a sync detection and demodulation unit connected to recover timing signals from an amplified signal output by the low noise amplifier;  
a plurality of receiver channel processors connected to the low noise amplifier and the sync detection and demodulation unit, each channel processor including a spread spectrum decoder, a demodulator, and an error correction decoder, for recovering baseband signals.
27. A receiver as claimed in claim 26, wherein said satellite broadcasts are C-band satellite broadcasts.
28. A receiver as claimed in claim 26, capable of receiving and processing redundant signals that are time-delayed signals or signals broadcast by different satellites.
29. A receiver as claimed in claim 26, wherein said antenna is a phased array antenna.
30. A receiver as claimed in claim 29, wherein said antenna is a conformal retrodirective phased array antenna.

Serial Number 10/699,639

31. A receiver as claimed in claim 29, wherein the antenna is a square flat flexible panel.
32. A receiver as claimed in claim 29, wherein each element in the phased array is a crossed dipole.
33. A receiver as claimed in claim 26, wherein said amplifier includes a Field Effect Transistor.
34. A receiver as claimed in claim 33, wherein said amplifier includes a High Mobility Electron Field Effect Transistor for at least one element of said antenna.
35. A receiver as claimed in claim 34, wherein said amplifier includes an Indium Gallium Arsenide High Mobility Electron Field Effect Transistor.
36. A receiver as claimed in claim 26, wherein said sync detection and demodulation unit includes an active carrier tracking processor.
37. A receiver as claimed in claim 36, wherein said sync detection and demodulation unit further includes a sync processor for detecting and demodulating a CW clock tone to generate a sync pulse.
38. (Previously Presented) A receiver as claimed in claim 26, wherein one said sync processor processes a sync signal for a primary transponder, and a second said sync processor processes a sync signal for an unsynchronized second transponder on the same or another satellite.
39. A receiver as claimed in claim 26, wherein the spread spectrum decoder is a Direct Sequence Spread Spectrum Code Division Multiple Access decoder.
40. (Canceled)

41. (Canceled)

- 42. A receiver as claimed in claim 26, wherein a number of said channel processors is equal to a number of channels being received at any one time.
- 43. A receiver as claimed in claim 26, wherein a first said receiver channel processor is used for a first primary data channel, a second said receiver channel processor is used for a second primary data channel, and a third said receiver channel processor is used for one of a time-delayed redundant signal and a signal received from a second satellite.
- 44. A receiver as claimed in claim 26, wherein at least one additional said receiver channel processor is used to process emergency or public service information.
- 45. A receiver as claimed in claim 26, further comprising a channel expander for decompressing the baseband signal.
- 46. A receiver as claimed in claim 26, further comprises a channel assembler for assembling data packets output by the combiner if the satellite broadcast includes packetized data.
- 47. A receiver as claimed in claim 26, further comprising at least one processor selected from the group consisting of an audio format processor and a video format processor.
- 48. A receiver as claimed in claim 26, further comprising a GPS receiver chip arranged to automatically update receiver geographic position so that when a broadcast of emergency or public service information is detected, regular operation of said receiver may be preempted if said receiver is within an area affected by said emergency or public service information.

49. (Previously Presented) A receiver for use in receiving C-band satellite broadcasts, comprising:

- a small antenna providing nearly hemispherical coverage;
- a low noise amplifier connected to amplify a signal received by the antenna;
- a sync detection and demodulation unit connected to recover timing signals from an amplified signal output by the low noise amplifier; and
- at least one receiver channel processor connected to the low noise amplifier and the sync detection and demodulation unit, wherein said antenna is a conformal retrodirective phased array antenna.

50. A receiver for use in receiving C-band satellite broadcasts, comprising:

- a small antenna providing nearly hemispherical coverage;
- a low noise amplifier connected to amplify a signal received by the antenna;
- a sync detection and demodulation unit connected to recover timing signals from an amplified signal output by the low noise amplifier; and
- a plurality of receiver channel processors connected to the low noise amplifier and the sync detection and demodulation unit, each channel processor including a spread spectrum decoder, a demodulator, and an error correction unit, for recovering baseband signals,
- wherein a first said receiver channel processor is used for a first primary data channel, a second said receiver channel processor is used for a second primary data channel, and a third said receiver channel processor is used for one of a time-delayed redundant signal and a signal received from a second satellite.

51. A receiver as claimed in claim 50, wherein at least one additional said receiver channel processor is used to process emergency or public service information.

52-58. (Canceled)